DOCUMENT RESUME

ED 290 708 SP 029 721

AUTHOR McCollough, David D.
TITLE The Mental Aspect of Athletics: The Effects of the Mind's Influence on Athletic Achievement and Performance.
PUB DATE 87
NOTE 58p.; Exit Project, Indiana University at South Bend. Appendixes B and G contain marginally legible type.
PUB TYPE Reference Materials - Bibliographies (131) -- Dissertations/Theses - Undetermined (040)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Affective Behavior; *Athletics; *Cognitive Processes; Emotional Response; *Performance Factors; Psychological Patterns; *Sport Psychology
IDENTIFIERS Positive Attitudes

ABSTRACT

This study of athletes seeks to determine that a relationship exists between the mind and the body. It presents negative psychological factors that may arise and shows possible ways to enhance athletic performance through psychological techniques. The central part of the study is an annotated bibliography covering selected literature on these topics. The first section deals primarily with studies that give support to the idea that a relationship exists between the mind and the body in athletic performance. The second section presents negative psychological influences or factors in competitive situations--items such as pressures, fears, and anxieties are covered. Finally, studies on ways to enhance performance are featured--imagery, mental preparation, mental rehearsal, and goal-setting are discussed. A glossary of terms is included as well as a reference bibliography. The following charts or forms are appended: (1) performance quality; (2) correlations amoung variables; (3) analysis of variance of serves; (4) treatment groups and performances; (5) psychological self-rating sheet; (6) level of aspirations; (7) results of swim championships; and (8) personal survey. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED290708

The Mental Aspect of Athletics: The Effects of the Mind's Influence on Athletic Achievement and Performance

By

David D. McCollough
Graduate Student

Study Directed
By

Charles R. DuVall, PH.D.

Submitted in Partial Fulfillment
of the Requirement for the Course S591
Exit Project - Indiana
University at South Bend

SP 029 721

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

D.D. McCollough

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

TABLE OF CONTENTS

	Page
INTRODUCTION	1
Statement of the Problem	3
Significance of the Problem	3
Organization of the Study	3
Limitations of the Study	4
Glossary	5
ANNOTATIONS	
Relationship Between Mind and Body: Research	8
Relationship Between Mind and Body: Opinion	13
Negative Influences: Research	15
Negative Influences: Opinion	23
Enhancing Performance: Research	26
Enhancing Performance: Opinion	32
SUMMARY	33
CONCLUSION	36
RECOMMENDATIONS	38
BIBLIOGRAPHY	39
APPENDIX	44
Appendix A: Performance Quality	45
Appendix B: Correlations Among Variables	46
Appendix C: Analysis of Variance of Serves	47
Appendix D: Treatment Groups and Performances	49
Appendix E: Psychological Self-Rating Sheet	50
Appendix F: Level of Aspirations	51
Appendix G: Results of Swim Championships	52
Appendix H: Personal Survey	54
BACKGROUND	55

INTRODUCTION

Man's quest for superior athletic prowess has been a driving force behind athletic training and competition. Athletic competition has taken place between individuals, teams and countries for many years. Competition, especially athletic competition, is an integral part of the world's past and present societies. Athletic competition may take place in various forms, and it is because of this highly competitive nature that society has become more aware of mental and physical fitness. Striving to become more mentally and physically fit has drawn more attention today than ever before. In an effort to reach this state of fitness, people are more aware of their physical condition. In addition to physical fitness, athletic competition has become a routine part of life where thousands of people are actively involving themselves in individual and team competition. Many individuals who compete, enjoy the pleasure derived from healthy competition. Are there hidden psychological dangers involved in these competitive situations? Are people putting themselves into high stress situations? Are there ways to alleviate stress and enhance performance?

In order to show a more beneficial effect from the mind/body relationship, those involved with athletes and athletics should examine: 1) Whether a relationship exists between the mind and body, 2) Whether negative factors exist due to athletic competition, and 3) Whether there are ways to enhance performance. By examining the factors related to performance and

enhancing performance, it may make it possible for people to move closer to achieving a more mentally and physically fit state.

Sports psychology is a relatively recent study into the psychological side of athletic competition. The Eastern world has researched this topic for many years, but the Western world has only recently become more involved with the mind/body relationship side of competition and athletic behavior. Sport psychologists have tried to help players, coaches, parents, and others involved with competition learn more about themselves or aspects of their competitive sport. Sport psychology is beginning to be recognized as a possible aid to athletic training and prowess. Many athletes have already benefited from the research and findings of sports psychologists. Sports psychology could be an exceptional means of enhancing performance, thereby benefitting individual athletes, parents and coaches.

STATEMENT OF THE PROBLEM

This study will try to determine that a relationship exists between the mind and the body, to present negative psychological factors which may arise, and show possible ways to enhance athletic performance through psychological techniques.

SIGNIFICANCE OF THE PROBLEM

Educators and coaches need a better understanding of how the minds of young adults perceive events in competitive situations. Educators and coaches need to understand concepts to help improve the quality of athletic performance. It is the purpose of this study to review the literature of experts in the field of sports psychology and to show the significance these experts lend to athletic achievement. Through the research, literature, and opinions of experts in the field of sports psychology, insights into the thinking of today's athletes will be brought out. Mind/Body relationships, negative psychological factors, as well as ways to cope with these stressful situations to enhance athletic performance, will be discussed.

ORGANIZATION OF THE STUDY

The material dealing with the psychological aspect of athletic performance is abundant. In this paper, many articles may overlap into the different areas of study. The articles will be classified by major area of study depending on their content. The annotations will be arranged alphabetically by the author's last name. The first section of the paper will deal primarily with studies which give support to the idea that a relationship exists between the mind and the body in athletic performance.

The second section will present negative psychological influences or factors in competitive situations. Items such as pressures, fears and anxieties will be covered. Lastly, ways to improve and/or enhance performance will be stressed. Ideas such as imagery, mental preparations, mental rehearsal, and goal-setting will be discussed.

LIMITATIONS OF THE STUDY

The studies of concepts dealing with mind/body relationships are relatively young sciences. An obvious limitation dealing with the study of mind and body relationships stems from individuality. Through the review of the research literature dealing with mind/body influences, it becomes apparent that different individuals deal with specific athletic situations in their individualized way. The techniques presented to enhance performance can be used on an individual or group basis, but each individual may react to these techniques differently. This can present varied results for the performers. The study does bring out some generalized concepts which can be applied by individuals to possibly help improve their athletic skills and performance. In addition, much of the work dealing with mind/body relationships has been done extensively on elite-caliber athletes.

GLOSSARY

anxiety - "A general fear or foreboding, a personality trait marked by a lower threshold to stressful events." (Cratty: 286)

arousal - "The mind-body tension that compliments optimal performance." (Ogilvie & Howe: 31)

behavior modification - "Study the events that lead to and directly follow a maladaptive behavior and attempt to intercede in that course of events to break a learned response pattern." (Adams & Gullato: 59)

choking - "The rapid shallow breathing that results from high anxiety which can rob one of stamina." (Tutko & Tosi: 34)

competition - "To strive consciously or unconsciously for an objective." (Webster's)

concentration - "Putting oneself into the state of mind and body most conducive to achieving his or her best." (Tutko & Tosi: 107)

confidence - "Having faith in one's talents and accepting challenges that test one's limits." (Tutko & Tosi: 78)

defense mechanism - "Psychological mechanism that enables a person to handle unpleasant, anxiety-arousing emotions." (Adams & Gullato: 160)

goal-setting - "Using positive goals to help individuals focus on what they want to attain, not on problems or failure in their performance." (Danish & Hale: 11)

hypnosis - "The uncritical acceptance of suggestion by a subject who is in a trance." (Blucker & Llewellyn: 108)

imagery - "Imagining the specific situations in which you must perform." (Taylor: 91)

mental fitness - "The state of optimal mental preparedness." (Taylor: 93)

mental preparation - "Achieving a psychological state conducive to successful sports performance." (Blucker & Llewellyn: 108)

mental rehearsal - "Entering a state of relaxation to prepare the inner world (one's mind) to match the outer world (the athletic event) and in the process, prime oneself internally to relate only to that which contributes something of substance to the anticipated performance." (Garfield: 64)

motivation - "A tendency to carry out a particular set of behaviors." (Howe: 1)

optimum performance - "The highest possible performance for an individual or team limited by physiological and physical parameters." (Howe: 2)

peak performance - "The ability to reach into oneself and draw upon sources of energy and inspiration that usually transcend every-day experience." (Garfield: 61)

positive mental attitude - "Controlling any thoughts that can produce negative or intrusive feelings, particularly those that undermine self-confidence." (Ogilvie: 56)

psych-down - "The idea that relaxation will help the athlete who is tight regain coordination and timing." (Nideffer: 1)

psych-out - "Not able to cope with the anxiety that is always present in a sport." (Nideffer: 1)

psych-up - "A motivational boost to remind the unmotivated or depressed athlete of the importance of the game." (Blucker & Llewellyn: 76)

relaxation - "No response." (Maltz: 176)

self-esteem - "The evaluative component of the self-concept which is the collections of attitudes, judgments, and values which an individual holds with respect to one's behavior, one's body, one's ability, one's worth as a person - in short, how one perceives oneself." (Taylor: 88)

slump - "Prolonged performance decrement that causes an athlete or team to suffer a serious loss in self-confidence." (Ogilvie & Howe: 30)

sports psychology - "A multi-faceted aspect of coaching and sports which includes developmental psychology, personality of performance, learning and training, social psychology and psychometrics." (Blucker & Llewellyn: 2)

stress - "An internal reaction, an intervening variable between situations and performance." (Cratty: 288)

success - "Attained through self-satisfaction in knowing that one did everything within the limits of his or her ability to become the very best he or she is capable of becoming." (Wooden: 15)

tension - "An overt muscular contraction caused by an emotional state or by increased effort." (Cratty: 288)

transcendental meditation - "Induce physiological changes inversely related to anxiety including reduced heart beat and respiration, decreased blood pressure, and relaxation of muscles." (Taylor: 91)

visualization - "Creating pictures, sounds, and sensations to add to one's mental rehearsal, enriching it." (Garfield: 65)

RELATIONSHIP BETWEEN MIND AND BODY

Research

Caudill, Desiree. "Psyching-Up and Track Athletes: A Preliminary Investigation." Journal of Sports Psychology 5 (1983): 231-325.

This study was done with 16 male and 16 female randomly chosen hurdlers and sprinters. Subjects performed alone in their particular event under both psych-up and control conditions. The experiment was to test "psyching-up" strategies. The subjects were to "psych-up" one minute prior to competition. Their "psych-up" was to mentally prepare themselves for maximum performance. In the control group, the experimenter talked to the subjects one minute prior to the race. The results showed a significant increase in performance of the "psych-up" group over the control group.

Daniels, Roberto R. "Emotional Energy Among College Football Players." Research Report 1980: 1-10.

This study was designed to show if "psyching up" or "psyching down" techniques were needed to reach optimum performance. A total of 25 Division I and 36 Division II football players were assessed. A 20-item State-Trait Anxiety Inventory (STAI) was used to measure the players emotional energy (anxiety) level. The testing was completed 96 hours prior to the event and retested 24 hours prior to the same contest. 76 results showed significant difference between anxiety levels of the athletes from the two divisions. Division I athletes showed higher emotional energy levels than the Division II athletes. The suggestion was to review STAI results for individual athletes to see if they need to be "psyched up" or "psyched down" in order to reach peak performance levels.

Fox, Randy George. "The Construction of an Achievement Motivation Scale For Use in Sporting Environments." Journal of Sports Psychology (September 1977): 1-70.

Fox's study was designed to construct an Achievement Motivations Scale, based on the Nygard and Gjesme Achievement Motives Scale. Fox's scale was administered to 176 male and female swimmers at the 1977 Canadian Winter Swimming Championship. The scale was used as a predictor of the athletes attitudes toward improving his or her performance. Fox's scale measured levels of Motivation to Approach Success (ms) and to Avoid Failure (mf) in the athletes. The predictions included improved performance from the high ms - low mf athlete. The results were low with the scale predicting only 10% of the female's swimming performance improved. The results for the male's performance were even less. It did, however, show relevance between athletic motivation and performance based on the minimal results.

Garfield, Charles. "Do Limits Really Exist?" Women's Sports and Fitness September, 1985: 60-61.

This article showed optimal athletic performance is a phenomenon which can be controlled. Garfield described the procedure for people to reach inside themselves and achieve a performance which seemed impossible. Garfield explained that most peak performers experience a sense of nervousness during competition. This nervousness gives way to a high expectation of success. The athlete feels the everyday world receding and a driving force takes over. The athlete focuses on the present and anticipates actions before they occur. At peak performance time, an extra sense of power from within seems to take over. The athlete becomes totally absorbed by the activity. Lastly, Garfield wrote of the joy associated with the sense of achievement and accomplishment. Garfield explained that the product achieved through athletic competition and performance was not solely a physical phenomenon, but could be influenced greatly by the mind's power.

Gill, Diane L., Karen M. Ruder, and John B. Gross. "Open-ended Attribution in Team Competition." Journal of Sports Psychology 4 (June 1982): 159-169.

In this article, athletic achievement was explained by studying causal attribution of team competition and how the attributions of the winning and losing teams differ. A two field study of 162 college women volleyball players and a two laboratory experiment of 128 undergraduates produced 352 open-ended attributions. After competition the athletes completed attribution items. They were classified as three causal dimensions of focus: causality, stability, and controllability. The attributions also were classified as referring to self, teammates, or team as a whole. The results showed the attributions were internal, unstable and controllable. Winning team members reflected a tendency to use controllable and unstable attributions. The attributions also showed emphasis to the team as a whole, rather than to individuals. In particular, teamwork was a popular causal explanation. The findings suggested the focus should be on causal dimensions rather than the four traditional attributions of effort, luck, ability, and task difficulty.

Grove, Robert J. "Effects of Competitive Outcomes and Margins of Victory/Defeat in Practice Behavior & Performance Quality." Paper presented at the Annual Meeting of the American Alliance for Health, Physical Education, Recreation and Dance. April, 1983.

Grove's study dealt with the effects of success and failure in competitive situations. It investigated the idea that the margin of victory or defeat might have an influence on success and failure and the behavior associated with success and failure. Grove took a look at two aspects of performance in this study: 1) the amount of practice voluntarily undertaken by the competitors prior to each trial of competition and 2) the quality of performance on each competitive trial. The study was set up using undergraduate college females. The experiment involved two levels of competitive outcomes: constant winning or constant losing. It also involved two levels for the margin of victory or defeat: consistently large or small. The feedback to the participants was randomly given and not based on actual results. The number of practice throws made prior to competition remained constant when the subjects were winning, but decreased when the subjects were losing. The margin of victory/defeat did not influence practice behavior. When the victory/defeat margin was small, the performance scores were very similar. Therefore, the losers did not outperform the winners after a small margin. When the victory/defeat margin was large, the losers performed better than the winners. The results of this study showed performance-enhancing effects from short-termed failure. (See Appendix A - graph of victory/defeat margin and performance.)

Henschen, Keith. "Achievement Motivation and Sex Role Orientations of High School Female Track and Field Athletes vs. Non-athletes." Paper presented at the Annual Meeting of the American Alliance for Health, Physical Education, Recreation and Dance. April, 1982.

In this study, the level of achievement motivation and sex role orientations difference between female high school track and field athletes and non athletes was investigated. The study used 67 female athletes and 67 female non-athletes. Achievement motivation was measured by the Mehralian Scale of Achieving Tendency. Sex role orientation was measured by the BEM Sex Role Inventory. The results of the data gathered in the study showed a significantly higher level of achievement motivation of the female athletes compared to their non-athlete female counterparts. In addition, a significant relationship existed between sex role orientations and achievement motivation. The higher levels of achievement were measured with the masculine androgynous sex roles, as compared to the feminine and undifferentiated sex role orientations. (See Appendix B - shows correlations of achievement motivation and sex role classification.)

Ransom, Kay. "Effect of Situation Criticality on Performance of Elite Male and Female Tennis Players." Journal of Sports Behavior 8 (September 1985): 144-148.

Ransom's study had two purposes: 1) to determine if there were any differences in elite male and female tennis players in terms of their ability to come from behind to win a match after losing the first set, and (2) to determine if elite male and female tennis players come from behind to win significantly more often than less elite tennis players. Ransom cited information showing achievement motivation and indicated that women seem to have a lower self-confidence than men. This confidence level is theorized to have a bearing on the athletes ability to come from behind to win athletic events. Ransom cited a study done by Weinberg, Richardson and Jackson (1981) that found male tennis players (professional and amateur) came from behind to win more often after losing the first set than female tennis players. These players were from the top 500 in the world. Ransom's study used elite top-20-ranked male and female tennis players for each of four divisions. The results showed the top 20 male and female players did not differ significantly in their ability to come from behind. No significant difference was found between the different age groups. The top 20 players came from behind more significantly than the top 500, even when the top 20 went against top 20 competition. Gender seemed to make little difference in the comeback of the top 20, but all had a very high self-confidence level. Ransom felt much of this confidence is based on previous performance accomplishments.

Singer, Robert. "What Sports Psychology Can Do for the Athlete and Coach." International Journal of Sports Psychology 15 (1984): 52-61.

Singer took a look at the significance sports psychologists could have to an athletic team and their performance. Singer pointed out that sports psychologists lend their expertise to building a proper body of knowledge and applying that knowledge to various sports. Singer stated the sports psychologist can contribute to mutual understandings, morale, cohesion, and the general effectiveness of the unit. The sports psychologist can test for motivation to train, ability to with stress in competitive situations, the desire to accomplish, and determine the emotional processes needed for optimum athletic performance. (Suggestions of ways to reach the potential of the entire team, but yet focusing on the individual difference of the athlete, can be enhanced by the sports psychologists.) They can recognize the mental and emotional requirements needed for high performance levels. They can help train the athlete in dealing with individual stress, the fears of failure and disappointment and can offer counsel on conflict management. The sports psychologist can teach the athlete how to handle identity conflicts and give alternative solutions on how to solve the problems. Lastly, Singer explained the sports psychologist can give insight into the role of sports in the lives of athletes.

Taylor, Jim. "The Effects of Mental Fitness on Athletic Performance." International Journal of Sports Psychology (1981): 87-95.

Taylor looked at the possibility of an increase in athletic achievement by personality modification. Taylor pointed out that human beings have similar physiological make-ups, but it is the psychological differences which set each person apart. The types of individualized psychological differences included self-esteem, intelligence, and a need for achievement. Taylor explained that those individuals with high self-esteem know their limitations, have faith in their abilities, and are willing to challenge themselves. Those individuals with low self-esteem have little faith in themselves and have the fear of failure. Taylor wrote about self-serving bias. Self-serving bias is the tendency to attribute success to internal factors and failure to external factors. Individuals with high self-esteem engage in self-serving bias. Taylor presented methods to improve self-esteem which included task success, positive reinforcement, and transcendental meditation. Taylor discussed the need for achievement (n Ach) or the tendency to do things as fast and as well as possible. The n Ach was based upon success. Taylor felt the n Ach could be improved by achievement imagery and activities toward achievement goals. Anxiety is another phenomenon Taylor felt led to the building of success. Anxiety is an entity needed for peak performance. Taylor explained that the anxiety needed to be in the proper amount. There should be enough anxiety to prepare an individual for competition, but not too much to hinder performance. Taylor gave ways to conquer anxious feelings, such as physical repetitions practice, mental rehearsal imagery and transcendental meditation. Taylor felt athletes should have a program for developing mental skills, which coordinates their physical skills development. Taylor further explained, if the athlete is educated to understand some of the whys of the fear, they will no longer have the fear. Taylor prepared a mental fitness program for the athletes using the following seven criteria:

1) Personality Test for strength and weaknesses
2) Know and explain the psychological demands of the sport.
3) Learn Transcendental Meditation.
4) Personality and stress course of the mind and body.
5) Counseling and mental training to improve weaknesses and enhance strengths.
6) Repetitive practices of the mind.
7) Competition using mental fitness techniques.

Taylor felt an increase in athletic performance will take place if personality modifications are implemented into the overall training.

Opinion

Edwards, Sally. "Incurable Optimism and Other Secrets of Success." Womens's Sports and Fitness 8 March, 1986: 34-36.

Edwards interviewed three triathletes with the common trait of a non-faltering optimism. The author felt this optimistic view is essential to a champion athlete. One of the competitors interviewed tries to approach each new sport in an aggressive, positive way. The realization of the tremendous amount of stored potential which exists within was discussed. This athlete's "win-win" philosophy concentrates on only the positive aspects and sharing them with one's competition. One should give encouragement to a competitor no matter what the situation or outcome. Another athlete the author interviewed experienced first class competition in the triathalon and felt great achievement because of psychologically peaking for the race. This is achieved through confidence and stems from a competitor's positive attitude, including accepting what one cannot change and changing the things one can. During competition, the athlete did not feel doubt-free, but the positive side would take over. All competitors experience doubt, but the key is how one handles it. The last athlete interviewed discussed the mental discipline and imagery of competition. This athlete was driven to excel in the triathalon. The key to this athlete's training and success was concentration and visualization. The athlete would mentally simulate a race and concentrate on visualizing being strong and fast. The competitor felt that dedication is the quality which makes the difference.

Greenspan, Emily. "Conditioning Athletes Minds." New York Times Magazine 28 August, 1983: 32-36.

This article dealt with the sports psychologist's role in helping improve athletic performance. Greenspan emphasized the concept that mental training ties directly in with physical training and pointed out that athletes have fears and anxieties. When these fears and anxieties are present, internal systems break down. The athlete feels frustrated and negative thoughts are present. As this anxiety grows, concentration is shattered and the feelings of being in control are diminished. At this point, sports psychologists feel athletes are over stimulated. Sport psychologists have set up a three phase discipline they follow: educational - the teaching of performance enhancing techniques; research - studying the validity and effectiveness of testing and training programs; and clinical - counseling anxious or depressed athletes. Sports psychologists focus on competitive situations. First, the psychologist relaxes the athletes and has them picture themselves playing the sport. If signs of stress are showing, the psychologist has them focus on successful endings to previous failures. Self-confidence is stressed by asking the athlete to relive successful past sporting competition. In the process, the athlete concentrates on the physical and emotional feeling associated with the success. Included in the instruction are realizing warning signs of hyper-stimulation and giving the athletes tips on how to lower their anxiety levels. In addition to these; teaching, biofeedback, hypnosis, and deep breathing techniques are used. Greenspan concludes that mental techniques enhance and improve performance.

Potera, Carol. "Women's Mental Edge." Women's Sports and Fitness 8 July, 1986: 53.

Potera took a look at the psychological aspect of women compared to men. It was pointed out the body's physical make-up allowed men to be better athletes. The article emphasized the womens strengths as psychological. Women focus on determination, patience, team unity, emotionality and openness to new ideas. Women seem to participate in athletics for love of the sport, socialization, and recognition by others. Women seem to be more willing to accept advice on how to move their bodies and ways to improve performance. It was pointed out women have a larger corpus callosum in the brain. This means it is easier to apply techniques such as visualization and biofeedback. The sports world seemingly is dominated by male views and rules. Potera felt the female gender can compete and become highly successful athletes because of their psychological difference in mental make-up.

NEGATIVE INFLUENCES

Research

Feltz, Deborah. "The Relevance of Youth Sport for Clinical Child Psychology." Clinical Psychologist 39 1986: 74-77.

Feltz's article dealt with ideas to help alleviate stress and enhance positive benefits of youth sports. Feltz pointed out that children with low self-esteem and high competitive trait anxiety who are subjected to high level competition could suffer psychological strain. Feltz gave some guidelines to help modify stressful situations and increase self concept. Rules can be modified to allow for greater success. The games, scores, league standings, or individual statistics can be eliminated. The coaches can be educated to relate better to their players. Lastly, the parents can be informed of their responsibilities to their child and their child's team and coaches. Feltz explained the factors to be considered before allowing a child to compete: the cognitive readiness of the child to compete, physical maturation and body size, the child's skill level, the type of sport, and the philosophy of the program.

Houseworth, Steven, and Joel Thirer. "Comparison of Motive to Succeed, Motive to Avoid Failure and Fear of Success Levels Between Male and Female Intercollegiate Swimmers." Research Report 1982: 1-25.

In this study, the motive to succeed, the motive to avoid failure, and the fear of success based on sex difference was looked at. A total of 121 NCAA division I and II swimmers were listed during the 1982-83 swimming season. It was hypothesized that the males would have higher levels of motive to succeed. The females were thought to exhibit evidence of higher levels of fears of success and motive to avoid failure. The actual athletic competition would be the basis for the analysis. Assessments were made one week prior to competition using the Mehrahiar's scale of achieving tendencies, Marten's Sport Competition Anxiety Test, and Pappo's Fear of Success Inventory. Immediately prior to competition, the Illinois Self Evaluation Questionnaire was given. Analysis revealed elevated levels of motive to succeed and average to low levels of motive to avoid failure and fear of success. A comparison of male to females showed no significant differences. The study supported the idea that females who train and compete against other females do not show increased levels of fear of success.

Lanning, Wayne. "A study of the Relationship Between the Reduction of Competition Anxiety and an Increase in Athletic Performance." International Journal of Sports Psychology 14 (1983): 219-227.

Lanning presented the idea that there is an interaction effect between the amounts of anxiety needed to perform certain tasks and maximum efficiency. It was pointed out that maximum performance is reduced by too much anxiety. Lanning's study dealt with systematic training in the reduction of competition anxiety and an increase in athletic performance. Lanning suggested that maximum performance is based on the personality interaction within a coach's system. Lanning's sample consisted of 24 female volleyball players, 14-18 years old, from six different high schools in Hawaii. The subjects were randomly and equally assigned to a control or treatment group. The treatment consisted of seven 30-minute sessions of relaxation training which were conducted prior to the team's practice session. The athletes were subjected to the Sport Competition Anxiety Test, plus actual athletics performance based on the number of successful serves during competition. The results indicated the treatment group, which had received anxiety management training, was different from the control group. The players treated had reduced competition anxiety and actual athletic performance was increased following the training. The training was apparently effective when performed prior to competition, but the effects seemed to wear off. The study gives evidence that anxiety control exists, can be treated, and has an influence on athletic performance. (See Appendix C - analysis of variance of serves, SCAT scores, and variance of both dependents.)

Lewis, Ricki. "Exercise Addiction - Some Athletes Let Their Fix Take Precendence Over Everything Else." Women's Sports and Fitness 6 January, 1984: 14-17.

In this article, Lewis expressed concern for athletes who use exercise as a means for coping with their daily stress. The athletes who become obsessed with running are called obligatory runners. These athletes are preoccupied with running as a means for self worth. The extreme cases of obligatory runners are so obsessed that they would not stop running at signs of physical distress because they are psychologically dependent upon exercise. The exercise will eventually take precedence over their job, relationships and their health. These athletes are compared to drug addicts and anorexics. Lewis explained their way to escape feelings of worthlessness is to use exercise as a mood-altering device. Lewis also gave reference to the physiological factors which seem to tie in with the psychological factors. Ideas such as increase in endorphin levels in the blood stream can be affected by the acute exercising techniques. The obligatory athlete is an extreme group of five percent of the population. Many of these athletes are reformed smokers, alcoholics, gamblers, and overeaters and all have a common characteristic of exercising to achieve a sense of self-worth.

Murphy, Shane M., and Robert L. Woolfolk. "Effects of Cognitive Intervention on Sports Anxiety and Performance." Paper presented at Annual Convention of the American Psychological Association. Aug. 1984: 1-24.

In this study, it was hypothesized that performance of fine muscle motor skills will decline with arousal. The authors cited Oxedine's study which stated fine motor activities will be adversely affected by high arousal. The motor skill task performed in this study was putting a golf ball. A total of 61 undergraduates were randomly chosen, 19 of whom who were highly anxious in competitive situations. The subjects were assigned to one of three experimental groups: 1)Cognitive-behavioral stress reduction; 2)"psyching-up" arousal; and 3)control group. The subjects were allowed pretest and post-test putts. In between, each group listened to tapes correlating to their assigned groups. There was a significant decrease in tension in the stress reduction group. The stress reduction group significantly improved their putting. The control group improved their putting, while the "psyching-up" group did worse. The "psyching-up" group also reported an increase in tension. (See Appendix D - results of treatment groups and performances.)

Ogilvie, Bruce. "Psychology - Internal Injuries." Women's Sports and Fitness 6 November, 1984: 62.

In the article, Ogilvie took a look at athletic injuries as a psychological defense mechanism. Due to the tremendous amount of pressure applied by coaches, parents, peers and communities, athletes sometimes need a way to escape. Pain or a temporarily disabled state could be a socially acceptable means of avoiding pressure. Many athletes, especially young athletes, hide behind an athletic-type injury to avoid performing in an anxious situation. Ogilvie pointed out the reason athletes have psychosomatic injuries or problems is the fact that many athletes base their feelings of self-worth on athletic achievement. There are many highly competitive levels of athletics. In order to get away from the grind, some athletes experience psychosomatic disorders. Some of these disorders are accompanied by physical ailments, such as headaches, nausea, and muscle aches. Ogilvie explained that most teams have some degree of seeking sympathy from teammates and coaches. Ogilvie suggested creating an atmosphere which does away with the self-defeating attitude. The environment should be free of ridicule dealing with suggestions of failure. Lastly, the defense method should be recognized as a potential problem for the athlete. The athlete should not be shown any special attention for this type of behavior.

Ogilvie, Bruce. "Psychology: Looking Past the Finish Line." Women's Sports & Fitness January, 1984: 51.

In this article, Ogilvie took a look at the social implication of the elite athlete's training regiment. These athletes devoted endless time to the task of self-improved athletic achievement. The problem Ogilvie pointed out is the lack of some basic social needs. The elite athletes find many rewards from their athletic participation, but are vulnerable to the desire of the world outside of sports. After competition, the athlete may feel they have lost touch with many other important aspects of their nature. These athletes may feel they cannot be open and explore various avenues of their personality. Ogilvie suggested these elite athletes need to open themselves up. These athletes should not be afraid to show that they have weaknesses in their personalities. Furthermore, Ogilvie suggests that the athletes need to explore outside activities which interest them. Ogilvie pointed out that the athletes need to prove to themselves they have control of their life. The athletes can now, after their athletic career, pursue a second career. Lastly, and most importantly, Ogilvie suggested that the athlete should realize people are loved and accepted for what they are and not just their athletic achievements.

Ogilvie, Bruce. "Psychology: The Tie That Binds." Women's Sports & Fitness February, 1984: 12.

Ogilvie discussed the psychological pressure manifested through overly-concerned, overly-involved parents. It was pointed out athletics are an emotional bond for the family. As the emotional bond increases, the parental involvement increases. Ogilvie states many parents go beyond their parental boundaries and can have an adverse effect on their child's athletic performance. Ogilvie felt that parents must be educated and made aware of their limits in dealing with their child's athletic participation. The ideal situation for the athletes is for them to determine the meaning of the sports experience for themselves. The parent should supply any available mental and physical support for their child's activities.

Ogilvie, Bruce. "Semi Tough is Not Enough." Women's Sports and Fitness March, 1984: 50-54.

Ogilvie discussed the mental toughness required to sustain the stress of competition. Ogilvie wrote in terms of the elite caliber athlete and their ability to handle stress associated with a highly competitive situation. Ogilvie presented a quiz to show where one would fit into a scale on mental toughness. The author gave ways to correct the weak mental state in order to improve competitiveness. Included in the guidelines are: 1) Refusal to become caught up in oversympathy for the opponent; 2) Do not confuse winning and losing with a gain or loss of approval; 3) Do not accentuate errors and mistakes out of proportion or use them as a measure of self worth; and 4) Develop the capacity to commend oneself for positive play. (See Appendix E - psychological self-rating sheet.)

Ogilvie, Bruce. "What's Holding You Back." Women's Sports and Fitness November, 1983: 8-9.

This article pointed out the pressures and motivational problems encountered during highly competitive situations. Ogilvie deals with motivational issues encounterd by the athlete and coach. Ogilvie's formula for achievement in sports is: Success = Effort + Time + Repetition + Modification. The author believed motivational problems with any aspect of the formula will reduce the chance for attaining the goal. Ways of coping with the motivational problems were discussed. These include: 1) Realizing the participation in a sport is for the athlete's self-fulfillment; 2)Isolation from peers may be the price one has to pay; and, 3) The athlete needs to focus on individual goals with immediate reinforcement.

Ogilvie, Bruce C., and Maynard A. Howe. "Beating Slumps at Their Own Game." Psychology Today July, 1984: 28+.

Ogilvie and Howe discussed the possible cause and remedies of various athletic slumps. Reference was made to several of Ogilvie and Howe's clients. The underlying cause of most slumps were related to stress. Most slumps had a direct influence on self-confidence and the majority were affairs of the heart (problems with boyfriend, girlfriend, spouse). Treatment included reprogramming the individual to a pre-slump state. The authors searched for signs of successful prior achievements and the proper state of arousal. Ogilvie and Howe would then reprogram the individual using key words and cues to get them in a state to overcome the stressful events. Many of these cues help renew the positive concepts and dissipate the negative ones.

Olszewska, Gertruda. "The Relationship of a Self-Image, Self-Estimation, and a Tendency to Dominate or Submit." International Journal of Sports Psychology 13 (1982): 107-113.

Olwzewsaka's study dealt with the concept that the team player is interdependent with one's self-image and self-estimation. Otszewsak explained that athletes must be aware of their self-estimation in order to adapt to new conditions. In athletic competition, proper self-estimation is based on successes and failures. Olszewska's study delved into team sports where successes are based on the integration of all players. The team performance can be lowered if only one member lacks confidence, underestimates abilities or is unaware of negative personality traits. Individual negative traits such as sensitivity, aggressiveness, mistrust of teammates or over-confidence can lead to the disintegration of team play. The study was set up for 260 volleyball, handball, and soccer players. To determine the players self-image and self-estimation, the Giessen Test was used. A tendency to dominate and submit was assessed by the A-S Reaction Study Test, and individual performance was assessed by a group of referees. There was correlation between high performance players and the scores on the Giessen Test. The results were as follows: the players of high-level performance considered themselves popular, sociable, appreciated and determined to achieve set goals. They felt that they had the ability to submit, cooperate, to control behavior and emotions, to make decisions, to take responsibility for their actions and the ability to get along with others. They saw themselves as reliable, determined to succeed, outer directed, independent, seldom depressed, trustful, sincere, and self-sacrificing. Conversely, low self-estimation existed in the players with a low level of performance. Based on the study, Olszewsak concluded that proper self-estimation is one of the factors increasing performance effectiveness. (See Appendix F - levels of aspirations vs. performance and level of dominance or submittance.)

Ross, John P. Jr. "Who's Winning - Your Sport or You?" Health 12 July/August, 1980: 17-18+.

In the article, Ross pointed out the fine line between athletics for fun and for competition. Ross emphasized that any event which needs measurement could be turned into a stressful situation. The more people compete, the more competitive they become. These people competed with peers on their own standards. Ross felt competition has turned into a win-at-all-cost situation. Ross felt sports should be a means of escape and relaxation, not a stressful, must-win situation. Many people try to work off tension through participation in sports. For some, this means a dangerous threat to their physical well-being because participants experience more stress trying to keep up with their performances or performances of others. Ross felt the non-athletes get caught in the competition. The non-athletes cannot participate without being good and cannot be good without participating. Ross' solution is to create a fun ethic. The athletes should progress at their own rate and be satisfied with themselves for their achievements. The sole purpose of participation should be for self-fulfillment and enjoyment. The athletes should feel they are accomplishing something of worth and of importance to them.

Shoemaker, John Bruce. "Is Your Game Aggressive?" Women's Sports and Fitness 8 November, 1986: 49.

Shoemaker's viewpoint in this article disagreed with the concept that sports builds character. Shoemaker felt that some sport participants could not differentiate between what is right or wrong. The article dealt with the concept that athletes who participate in a team or contact sport could be acquiring negative traits. Shoemaker believed these athletes to be much more aggressive, and Shoemaker pointed out these athletes tend to develop a lower standard of morals. The athletes seemed to focus on achieving their objectives at the expense of other participants. Shoemaker felt the team and contact sports athletes tend to treat others as obstacles which block their pathway to success. Shoemaker agreed with the sports psychologist who suggested that parents should channel their children into less aggressive sports participation.

Tutko, Thomas, and William Bruns. "The Child Superstar: A Curse or a Blessing?" Tennis USA March, 1978: 40-42+.

This article reports on the social and psychological pressures that are associated with the elite adolescent sport superstar. Tutko explained the pressures associated with early athletic success. The author felt that society assumes the adolescent superstar has complete control of physical, as well as psychological aspects of their life. Tutko is quick to point out there is nothing further from the truth. Most adolescent superstars are as insecure and anxious as the next adolescent. Tutko placed the role of the parent into perspective. It was stated that some parents incite undue pressures upon their child and insist athletics be the sole basis of their existence. Tutko showed steps the parents need to follow to get the child through this dramatic time. The concepts that the parent should follow include: 1) Showing love for the individual; 2) Helping the athlete handle and face failure; 3) Helping the child keep a realistic picture of themselves and, 4) Being objective and praising the child for good performance and recognizing poor performance without humiliation.

Vanfraechem-Raway, Renee. "Two Components of the Same Sport: Jumping and Sprinting - Two different Behaviors in Competition." International Journal of Sports Psychology 14 (1983): 252-262.

This article discussed anxiety and stress levels in the competition of high jumpers and sprinters. A picture frustration test and the Tayler Manifest Anxiety Scale were used during training sessions and before the competitive event. The high jumper's result showed significant improvement from training to competition, correlated with a decline in performance during competition. The sprinters showed a significant correlation among the performance, the level of anxiety, and the situations involving frustration. The comparison showed that the high jumper's particular skill led to high anxiety levels, which limited the performance. The need to study each particular behavior individually was also pointed out.

Opinion

Creekmore, C.R. "Games Athletes Play." Psychology Today July, 1984: 40-44.

This article dealt with the psych-out techniques used in athletic competition. It pointed out that fears and anxieties exist in competition. A way to bring out the fears and anxieties is by various psych-out methods. Psych-out techniques deal with intimidations and distractions. Physical distractions such as wild warm-up pitches by a baseball relief pitchers could lead to psychological anxieties. Verbal techniques for psych-out have been used in the boxing world. Techniques like staring at the opponent or bodily distraction such as bumbling and clumsiness have been used. The breaking of an opponent's routine or warm-up can lead to a breakdown in their concentration and preparation. Athletes stay within a range of psychological arousal in order to perform their task. If thrown out of their particular psychological range an athlete's performance can be severely affected or altered.

Johnson, William Oscar. "Marching to Euphoria." Sports Illustrated 53 July, 1980: 72+.

This article took a negative psychological approach to the exercise of running. Many positive factors were given for the benefits of running. Factors such as the release of tensions, depression, guilt and anxiety are beneficial reasons for running. Many runners use their exercise as a means for escape from day-to-day tensions. The basis for running is to develop a physical and mental form of meditation, allowing the runner to cope. Major emphasis, however, is the negative psychological factors which can and do develop in runners. Johnson pointed out the fact that runners can develop a form of psychological dependence on the activity. This dependence was similar to some drug related dependencies. Some runners experience withdrawal-type symptoms when they do not exercise. The withdrawal symptoms range from restlessness, irritability, sleeplessness, to guilt and feelings of anxiety. Some withdrawal is documented as so severe that the athletes felt physically nauseous, with some even contemplating suicide.

Kort, Michele. "The Heart of the Matter." Women's Sports and Fitness 8 January, 1986: 22-23+.

Kort looked at the arousal state of athletes which comes about during competition. The sports psychologists call the feeling "optimal arousal." This means one's overall emotional level is in perfect synch with the activity one is performing. As the optimal arousal level increases, so does one's performance - up to a certain point. Excess of this arousal state can hinder performance. The optimal arousal state varies for different sports and different individuals. Once one becomes aware of one's arousal state, one can train to attain it. The arousal state can be achieved by using techniques such as visualization and mental rehearsal. It was emphasized the arousal state had an individualized basis. Every person has a different degree of arousal and will perform differently based on this arousal. The key point is to control one's emotions to reach the peak performance level. Kort also pointed out the fact that athletes cannot always reach the proper arousal level. Outside factors such as anger and fear can throw the arousal level out of balance. Sometimes an athlete will leave the present and go into the past, thinking about successes or failures. Also, athletes go into the future wondering about successes or failures. The optimal arousal is reached when the athlete concentrates and adheres to the present conditions.

Lipsyte, Robert. "The Athletes Losing Game." New York Times Magazine. November 30, 1986: 58.

In this article, Lipsyte confronted the psychological fear of athletics after the athletes' competitive years are over. The athletes go through the same stages as terminally ill patients. The stages include shock, denial, anger, depression and acceptance. The fear is based on the concept that they cannot handle the real world. The athletes have had things handed to them all their lives, and now they are not able to cope with the real world.

Mitchell, Michele. "Fear." Women's Sports and Fitness 8 January, 1986: 24+.

Mitchell, a competitive diver, explained the fear which exists in the competitive sport of diving. Stress evoked three types of responses in the author - physical, mental, and attentional. Physically, Mitchell was tight, stomach ached, muscles tightened, and heart rate increased. Mentally, the author was unable to control thoughts and pictured negative visualizations. The mental breakdown Mitchell felt was due to a breakdown in attentional focus. Instead of enjoying the benefits of training, the author would dwell on negative factors. Mitchell overcame these fears of competitive diving by writing down short and long range goals. Mitchell approached everything with a positive attitude and used positively reinforcing words. Mitchell implemented mind games to increase performance. A new dive was made fun and competitive by placing a small bet with a teammate to see who could do it the best. Lastly, Mitchell used relaxation or mental visualization of previous successes. These processes helped the author to overcome the fears.

Shriver, Pam. "Competition." Women's Sports and Fitness 8 January, 1986: 25+.

Shriver discussed competition and the varying levels of competition. Shriver feels that each athlete competes at a different competitive level based on their individuality. Everyone fears failure, but shows it in different ways. Shriver feels some athletes fear failure so much that it drives them to succeed. Other athletes are more passive and keep emotions under control to reach peak performance. Yet other athletes are more aggressive and outspoken on the court. Shriver discussed how tension plays a part in an athlete's performance. Shriver's way to release the tension is to let emotion out during competition.

Wayment, Heidi. "Anger." Women's Sports and Fitness 8 January, 1986: 24-25+.

Wayment discussed the effects of anger on competition in basketball. Wayment explained that some people are not able to compete as intensely as possible unless they are angered first. The author felt many people get flustered by anger. The athletes who do become flustered will have negative production, instead of positive. Wayment's anger is controlled and channeled into playing. It is kept within and not directed toward any one person. When anger did become person-oriented instead of game-oriented, Wayment felt the performance suffered. The author stated competition was a good emotional release and a good way to relieve tension through a controlled atmosphere.

ENHANCING PERFORMANCE

Research

Cahill, Peter. " Mental Training For Tennis." Athletic Journal 67 April, 1987: 16-19.

Mental rehearsal, coordinated with physical participation was discussed in this article. Mental training can be an extension of the physical participation in a sport. Cahill emphasized the fact that the mind cannot tell the difference between a real or imagined event. Mental training is therefore a beneficial supplement to the overall training process. Two important factors make this work: having a realistic self-image and developing a positive attitude. These are underlying premises on which to build a program. Cahill pointed out that self-image and positive mental attitude are closely linked. There are ways to improve positive self-image. The first is to congratulate oneself on good plays. A second way is to talk oneself into winning points. Mental mistakes can be overcome by having a positive attitude. The mental training process is highlighted into three processes. Relaxation is the first. The use of a horizontal resting position, deep breaths, and contractions of different muscle groups was discussed. Concentration, the ability to focus one's attention on a specific item or object is the second. The third process is the use of mental imagery techniques to picture the results before they occur. The results from these techniques are not immediate. Cahill emphasized that daily practice of both the physical and mental techniques should be incorporated into the athlete's training. Lastly, to ensure success, Cahill stressed that a belief in the program and a willingness to spend 20-40 minutes daily is necessary for performance improvement.

Danish, Steven J. and Bruce D. Hale. "Teaching Psychological Skills to Athletes and Coaches." Journal of Physical Education, Recreation, and Dance 54 (October 1983): 11-12+.

This article dealt with performance enhancement for all levels of coaching and physical education. The article emphasized long-term cause and effect. The athlete is given guidelines to cause lifelong enhancement and personal growth in athletics. The steps for this long-term achievement are goal-setting, relaxation, imagery, and self-talk. Daniel pointed out that the above steps should be used as enhancement to performance not directed toward the athlete with personal performance problems.

Evans, Fred, and Frank O'Block. "The Effects of a Motivational Training Program on Competitive Swimming." Journal of the Association for the Study of Perception 16 (Spring 1981): 11-18.

This study dealt with increasing the competitive swimmers' times through motivational training. The purpose of this training was to help recognize and correct problems and to help determine if the swimmers could improve their swimming performance. The swimmers' ultimate performance was based on two factors: the swimmers physical ability and the strength of the motivation involved for the swimmers to reach their goals. A workshop was conducted with swimmers from Chicago State University Swim team. The function of the workshop was to develop criterion swimmers could adopt and include in their swimming program. The motivation involved interaction of personalities and the immediate environment in developing the behavior. The workshop was performed on a twelve-man team. The program stressed four basic aspects: 1) Cognitive-behavioral synthesization, 2) Personology, 3) Micro-group exercises, and 4) Individual counseling. The Wilcoxan Matcher-Pair Signed-Ranks test was used to determine the workshop's significance. The results suggested the motivational training program enhanced results and had a positive influence on the swimmers' performance. Additionally, a swimmers' questionnaire answered by the participants, indicated they had positive attitudes toward the workshop and its results (see Appendix G - results of swim championships and survey of workshop effectiveness.)

Garfield, Charles A. PhD. "Sharpen Your Mind's Eye." Women's Sports and Fitness 7 December, 1985: 64-66.

This article took a look at mental rehearsal as a means for obtaining peak performance. Garfield stated that mental rehearsal, when practiced properly, improves confidence, reaction time, physical coordination, and concentration. The basis is relaxing and mentally projecting images in the brain. Garfield explained the inner world of the mind matched the outer world of the athletic event. The athlete performing the action should be the only thing existing in the world for the athlete. The explanation given is that mental rehearsal elongates the action and expands into a few minutes the actions the athlete must execute in a few seconds. Garfield pointed out that the key to mental rehearsal is action events. In order for rehearsal to be effective, action pictures, not still pictures, must be seen in the mind and must be as vivid and detailed as possible. The steps Garfield gave for the mental rehearsal procedure are relaxation, visualization, assign key trigger words, and carry-over from rehearsal to action. Garfield felt the procedure must be repeated with one's best performance. The process should be used prior to practice in the sports area involved. The process involves repetition and training. Garfield explained that once the mental rehearsal was mastered, it not only improved performance, but concentration also.

Green, Lance. "How To Use Time Between Plays." Athletic Journal 67 April, 1987: 12-13+.

Green discussed mental preparation for proper physical execution in baseball. There are three components to mental training. The first component is historical review. The player mentally reviews past execution techniques and decides if they are correct. If the techniques are not correct, the player decides how they can be corrected. The second component is preparation for the next play. Preparation is based on assessing the situation, applying subskills, and imagery (seeing the play being made). The last component gets the player into the present. The transition is made from thinking about the situation to performing the execution. Green stated that mental practice can be incorporated in practice or non-practice sessions. The mental preparation can make the difference between proper execution or failure to execute.

Howe, B.L. "Motivation for Success in Sport." International Journal of Sport Psychology (1986): 1-9.

Howe presented three theories for use in motivating athletes for competition. The application of these theories are based on a long term approval. Howe pointed out proper motivation can lead to positive performance. Howe's three theories for motivation included: 1) Achievement Motivation Theory; 2) Motivation through reinforcement; and 3) The Incentive Motivation Theory of Birch and Veroff. Howe further pointed out that athletes need to be subjected to programs leading to success, not stress. The author explained that the coach needs to realize the basic motivation for each particular athlete. Once the coach better understands the athlete, the coach can incorporate reasonable goals for each participant. Smaller goals dealing with specific skill components of the sports can be applied to a long term reachable goal. Howe also pointed out that pre-game pep talks can be more stressful than performance enhancing. He pointed out that proper fundamentals taught prior to the game are of more benefit to the athlete than a pre-game pep talk.

Kirschenbaum, David S. "Self-Regulation and Sport Psychology: Nurturing an Emerging Symbiosis." Journal of Sports Psychology 6 (1984): 159-183.

Kirschenbaum reported on the process of maximizing sport performance through self regulation. A five stage model was presented to show the usefulness of this idea and to show how it applies to sports psychology. The first step of the model dealt with the athletes specifying their goals. They should have a carefully thought-out plan to achieve their objectives. Secondly, the athlete should be willing to commit to change. Thirdly, the athletes' physical and social environments should be conducive to the pursuit of the desired goals. Fourthly, the athlete should be able to self-monitor, self-evaluate, and self-consequate events. The athlete should try to achieve goals through these components of self-regulation. Lastly, the athlete should recognize the changes which took place and the reasons why those changes took place.

Locke, Edwin A. "The Applications of Goal Setting to Sports." Journal of Sports Psychology 7 September, 1985: 205-222.

In this article, goal-setting was discussed as a basis for self improvement. The study indicated that better results occurred when specific, difficult goals were applied, as opposed to vague or easy goals. Specific long-term goals should be set. It was pointed out that short-term goals can help achieve the long-term goals. Goals can affect performance by affecting effort, persistence, and attention. The use of goals can lead to motivated strategy development. In order for goal-setting strategy to work, progressive feedback is necessary. The goals need to be accepted by those involved. There must be a plan of action to accompany the goals. In addition, competition can be a form of goal setting. Some ideas for setting goals related to game and practice were discussed. These include: setting goals for different elements of athletic skill as well as for strength and stamina, using goals to increase self-confidence, and improving performance by increasing the task's difficulty independently from goal difficulty.

Nideffer, Robert M. "Concentration and Relaxation in Sports." Sports Medicine Digest 7 (September 1985): 1-3.

This article suggested methods of reaching the optimum performance level. Nideffer pointed out two theories in use with athletics: the "psych-up" and the "psych-down" theories. The "psych-up" theory is used as a motivational boost to the athlete. The "psych-down" theory is used as a relaxation tool to help the athlete to gain control of his or her game. Nideffer emphasized the two factors which will enhance performance: 1) Muscle tension levels must be controlled; and 2) The athlete must have a performance-relevant attentional focus. The athlete must learn the difference between intense and tense. Intense means the antagonist muscles are tense, while those not involved are relatively relaxed. The intense athlete concentrates on external happenings - the "here and now." The tense athlete concentrates on outcome related cues and/or consequences. The tense athlete looks for negative signs which could indicate the possibility of poor performance. Nideffer suggested the way to improve performance and get the athlete into the intense state is to incorporate cues which relate to the execution of a particular skill. He said that athletes should avoid general cues like "get tough" or "relax." Instead, Nideffer suggested more specific instructions like: "keep the weight forward" or "follow through on each shot" could lead to the intense level needed for optimum performance.

Ogilvie, Bruce. "Mastering Mental Moves." Women's Sports and Fitness June, 1984: 56-57.

In this article, Ogilvie explained the concept and application of mental workouts. Ogilvie emphasized that mental drills can enhance physical skills. Mental skills can be mastered if there is enough motivation and willingness to pursue specific goals. The objective of the mental workouts is to create a harmony between the mind and the body. Ogilvie stated that the improvement of skills could come as early as one meeting to twelve to fourteen weeks of practice. The concept of mental workout is for the athlete to take charge of both the inner and outer world of their training. The athlete needed to overcome any intrusive negative feelings which could undermine self-confidence. The process Ogilvie outlined dealt with relaxation, visualization of past positive experiences, and finding the focal point of positive energies. Once the focal point of energies is found, the athlete has a center of concentration with which to correct possible negative factors. Ogilvie pointed out also that no amount of mental work could compensate for lack of training on the development of basic motor skills.

Ogilvie, Bruce. "Psychology and the Elite Young Athlete." The Physician and Sports Medicine 11 (April 1983): 195-202.

Ogilvie took a look at the stress factors and the motor skills demands on athletes. Ogilvie stated the stress factors and motor skills demands are a constant for each performer, but the attitudes, feelings and beliefs vary for each individual participant. Ogilvie explained there was stress produced from peer competition. The stress generated can cause confusion and reduce motivation. An athlete's motivation could further be reduced by parental jealousy, resentment and negative judgment. Ogilvie also pointed out the severe stress factors involved when the performer is expected to win. It was stated that parents, coaches, and peers can tend to develop a blanket of negative perception to downgrade the athlete. The athlete must be made aware of the outside influences which could affect performance. Behavior modification programs can be set up to help the athlete in competitive and non-competitive aspects of their life. Ogilvie emphasized the behavior modification program should be designed to reduce stress by working with the athlete, coach and parents involved. It is through stress management that the athlete can reach full potential and development.

Pearson, Philip. "Practical Application of Hypnosis in Sporting Performances." Australia Journal of Clinical Hypnotherapy 4 (March 1983): 13-19.

Pearson reviewed the use of hypnosis in sports psychology. Pearson pointed out that hypnosis is primarily used as a motivational technique. He pointed out that hypnosis may reduce the capacity demands associated in performing particular athletic skills. The three stages of treatment were discussed: relaxation, suggestion, and guided imagery. He suggested that hypnosis could be useful in bringing about extensive body movement awareness and aiding muscular performance in disabled athletes.

Zimmer, Judith. "Mental Gymastics." Health August, 1984: 50.

Zimmer's article dealt with ideas for mastering mental powers. Included in the process were practicing concentrating, setting specific goals, using mental imagery, rehearsing events in one's head, understanding what kind of concentration a particular sport requires, and removing unnecessary stimulation from the environment. Zimmer pointed out that mastery in these areas can lead to the development of the entire body. (See Appendix H - personal survey for determining focal strong points and weak points.)

Opinion

Tarshis, Bary. "Why Some Athletes Choke." Seventeen September, 1980: 40-45.

In this article, Tarshis explained that the phenomenon of "choking" in athletics is universal. Physiologically, "choking" is a psychobiological reaction to stress. "Choking" is associated with the hormone adrenalin. Adrenalin functions to stimulate the body under stressful conditions. Symptoms which usually occur with adrenalin production are shortness of breath, dry mouth, pounding heart, and stiffness in one's legs and arms. The same symptoms are associated with "choking". Tarshis suggested that each individual handles pressure differently. One theory on "choking" is that a person handles it according to their personality. A second theory is that a person handles it based on their level of skill and knowledge for the sport and the situation. A third theory dealing with "choking" is that a person must absorb it. Having experienced the sensation and feeling of "choking" helps athletes to control it. Tarshis described different techniques for handling the pressure involved in choking. Controlled breathing and staying mentally "up" after a mistake is one technique used. Positive visualization of the proper means of execution involved is another. Techniques such as hypnotics and a simple smile are possible techniques to use to overcome the concept of "choking". The bottom line is that a person must reach the point at which he or she will have confidence to handle the pressure well.

Zimmer, Judith. "That Old Black Magic." Health 18 December, 1986: 12.

The article dealt with the use of rituals and superstitions to help athletic performance. Although the article pointed out that rituals and superstitions can be harmful if carried to extremes, it discussed studies of some cyclists and runners who used superstition and rituals before competition. These beliefs helped to alleviate some of the tension and anxiety competitive athletes experience. The cyclist and runners who were interviewed stated that rituals helped them to become more in tune with their events. Many of the rituals and superstitions were developed individually and were similar to skills developed by sports psychologists for coping with athletic stress.

SUMMARY

The effects the mind has on athletic performance is an intriguing phenomenon. In the United States, sport psychologists' research dealing with the mind/body relationship is a relatively young science. Current research tends to support the concept that the mind influences athletic achievement and performance. The research of Garfield and Gill espoused the idea that an inner power is at work to effect and help control physical performance during competition. Fox's study showed that inner motivations to achieve success and to avoid failure are present in improving athletic performance. Caudill's and Daniel's research explored the use of "psyching up" or "psyching down" an athlete's mental state in order to improve performance. Groves showed that short term failure had a psychological effect on increasing performance. Henschen discussed various sex roles and how they relate to high achievement motivation. Singer presented ideas in support of sports psychology as a means of identifying underlying psychological inhibitions of the athletes and of helping the athletes to overcome these obstacles.

Many mind/body relationships which exist appeared to have a negative side associated with them. Feltz and Olszewska reported on the psychological strain which develops from self-image. A competitive situation or performance is a means of grading high or low self-esteem and self-estimation. Ogilvie discussed the athlete's use of injuries as a defense mechanism to avoid pressure presented by the sport. Ogilvie explained the "mental wall" which can be built when athletes allow athletics and

athletic training to seal them off from real world events and happenings. Shoemaker talked about athletes who could not differentiate between the benefits of athletics and the carry-over into the real world around them. Ross, Johnson, and Lewis described situations in which the sport was no longer a social experience but a threat to the well-being of the athlete. Houseworth showed that women had a "fear of success" but that it was no different than the men's. Ogilvie and Howe discussed athletic slumps and how they were related to psychological stress. Murphy, Lanning, VanFraechen and Ogilvie wrote of anxiety and stress levels created from competition. They also discussed means which have treated and which could treat the problem. Tutko and Ogilvie explained the stress and anxiety which could be created by overbearing parents. These articles brought out important concepts showing negative psychological factors present from competitive situations.

The stressful and anxious moments which can occur in competitive situations appear to have controllable means. Sport psychologists are working diligently to further understand the causes of these psychological problems. The sports psychologists also are working diligently to find ways to rectify the problem. Ogilvie and Taylor discussed the improvement of performance from behavioral modification. Pearson explained the use of hypnosis in aiding performance by treating underlying problems. Nideffer discussed the use of cues to trigger responses in the athlete and in return improve the performance. Ogilvie, Zimmer, Garfield, Green and Cahill showed ways to execute physical techniques mentally to aid and enhance performance. Included in the

techniques were imagery, relaxation, visualization, and positive mental images and attitudes. Danish's information was similar to those above but was directed more toward all levels of coaching and physical education. Evans and Howe discussed the application of motivational theories to enhance performance. Locke explained performance enhancement through the use of long-term and short-term goal-setting. Kirschenbaum's ideas were similar to Locke's ideas except they were based on self-regulation techniques.

CONCLUSION

There is more emphasis on the psychological aspect of competition today than ever before. The review of the literature shows that there are relationships which exist between the body's performance and the mind's influence on that performance. Although negative factors which exist in many competitive situations are involved, the treatment of these negative factors is possible and is dependent on the individual underlying causes.

It becomes apparent that there are psychological factors involved in almost any form of athletic competition. There are many different degree levels of stress, anxiety and motivation which can be created by competitive situations. The factors can be individualized or group based. A factor affecting one individual may not have an effect on another individual, while other factors may be common among many people. The factors can be found within the athlete and initiated by the peers, coaches, or family during competition or in a competitive atmosphere.

There are various ways in which the situations will be experienced and/or handled by each individual. There is no theory or set of concrete rules which govern the reduction of stress and anxiety or increases the motivation level of competitive athletes. However, there are certain general techniques which can affect a varied number of users. The use of some concepts or parts of concepts of one theory can lead to improved athletic results. The user may take concepts of one theory and mix and match with concepts of another theory to fit

individual needs. Many times the athlete is unable to do this and this is where sports psychologists can be beneficial. If the parents and coaches have an understanding of the concepts, they too can help to develop programs for the enhanced performance of the athlete.

The common basis of these ideas stems from the fact that stress, anxiety, and motivation come from within the athlete. The use of techniques such as goal-setting, behavior modification, imagery, visualization, and positive mental approval have proven to be successful means of enhancing performance. The results are mainly on an individualized basis, but have been successful for overcoming mental block and have led to better individual performance.

Many trainers, parents, coaches and athletes are ignorant of possible hidden psychological dangers associated with competitive situations. These people need to become more aware of underlying psychological causes and possible remedies to those situations. People must be educated to the fact that athletic performance is based on more than physical skills. There is a complex web of psychological interactions which lives in every competitive athlete. The trainers, parents, coaches and athletes need to be made aware of these psychological factors and realize their problems are not totally unique. Many people involved in athletics go through similar psychological strains. People should become aware of the techniques that are available to avoid stressful and anxious moments and to increase the motivation needed to enhance performance.

RECOMMENDATIONS

It is recommended that:

1) Steps could be taken to incorporate psychological coaching techniques in with required courses and field study for adults training to be coaches. There could be required courses designed and implemented into the college curriculum to help the coaches be aware of the psychological side of athletics and the techniques involved to help correct and improve performance.

2) Once the coaches are trained, they need to make the parents and athletes aware of the psychological factors involved in competition. They should help them realize there are techniques available to correct underlying psychological problems and ways to improve performance.

3) Awareness workshops, seminars, or courses dealing with the psychological side of athletics could be conducted. Coaches, athletes and parents could make use of these educational resources to become more aware of the psychological factors which could arise. In addition, they could learn of techniques which can be used to enhance their own performance or the performances of those they instruct or have an influence on.

4) Once coaches become aware of the problems and are familiar with the possible solutions, the program should be implemented into the coaches' respective programs. At the high school and college levels, training in goal-setting, imagery, etc. should become part of the daily practice regiment. The program can be presented to the athletes and the athletes could find the best suitable means for them.

BIBLIOGRAPHY

BIBLIOGRAPHY

Adams, Gerald K. and Thomas Gullota. Adolescent Life Experiences. Monterey, Calif.: Brooks/Cole Publishing Co., 1983. 59. (5)

Blucker, Judy A. and Jack H. Llewellyn. Psychology of Coaching: Theory and Application. Minneapolis, Minn.: Burgess Publishing Co., 1982. 108. (5,6)

Cahill, Peter. "Mental Training for Tennis." Athletic Journal 67:1 April, 1987: 16-19. (26,34)

Caudill, Desiree. "Psyching-up and Track Athletes: A Preliminary Investigation." Journal of Sports Psychology 5 (1983): 231-325. (8,33)

Cratty, Bryant J. Movement Behavior and Motor Learning. 3rd Ed. Philadelphia: Lea & Febjer, 1973. 288. (5,6,7)

Creekmore, C.R. "Games Athletes Play." Psychology Today July, 1984: 40-44. (23)

Danish, Steven J. and Bruce D. Hale. "Teaching Psychological Skills to Athletes and Coaches." Journal of Physical Education, Recreation, and Dance 54 (October 1983): 11-12+. (26,35)

Daniels, Roberto R. "Emotional Energy Among College Football Players." Research Report 1980: 1-10. (8,33)

Edwards, Sally. "Incurable Optimism and Other Secrets of Success." Women's Sports and Fitness 8 March, 1986: 34-36. (13)

Evans, Fred and Frank O'Block. "The Effects of a Motivational Training Program on Competitive Swimming."Journal of the Association for the Study of Perception 16 (Spring 1981): 11-18. (27,35)

Feltz, Deborah. "The Relevance of Youth Sport for Clinical Child Psychology." Clinical Psychologist 39 1986: 74-77. (15,33)

Fox, Randy George. "The Construction of an Achievement Motivation Scale for Use in Sporting Environments." Journal of Sports Psychology (September, 1977): 1-70. (8,33)

Garfield, Charles. "Do Limits Really Exist?" Women's Sports and Fitness September, 1985: 60-61. (9,33)

Garfield, Charles. "Sharpen Your Mind's Eye." Women's Sports and Fitness 7 December, 1985: 64-66. (27,34)

Gill, Diane L, Karen M. Ruder, and John B. Gross."Open-ended Attribution in Team Competition." Journal of Sports and Psychology 4 (June 1982): 159-169. (9,33)

Green, Lance. "How to Use Time Between Plays."Athletic Journal 67 April, 1987: 12-13+. (28,34)

Greenspan, Emily. "Conditioning Athletes Minds." New York Times Magazine 28 August, 1983: 32-36. (14)

Grove, Robert J. "Effects of Competitive Outcomes and Margins of Victory/Defeat in Practice Behavior and Performance Quality." Paper presented at the annual meeting of the American Alliance for Health, Physical Education, Recreation and Dance. April, 1983. (10,33)

Henschen, Keith. "Achievement Motivation and Sex Role Orientations of High School Female Track and Field Athletes vs. Non-Athletes." Paper presented at the Annual meeting of the American Alliance for Health, Physical Education, Recreation and Dance. April, 1982. (10,33)

Houseworth, Steven, and Joel Thirer. "Comparison of Motive to Succeed, Motive to Avoid Failure and Fear Success Levels Between Male and Female Intercollegiate Swimmers." Research Report 19[illegible]: 1-25. (15)

Howe, B.L. "Motivation for Success in Sport." International Journal of Sport Psychology (1986): 1-9.(28,34,35)

Johnson, William Oscar. "Marching to Euphoria." Sports Illustrated 53 July, 1980: 72+. (23,34)

Kirschenbaum, David S."Self-regulation and Sport Psychology: Nurturing an Emerging Symbiosis."Journal of Sports Psychology 6 (1984): 159-183. (29,35)

Kort, Michele. "The Heart of the Matter." Women's Sports and Fitness 8 January, 1986: 22-23+. (24)

Lanning, Wayne. "A Study of the Relationship Between the Reduction of Competition Anxiety and an Increase in Athletic Performance." International Journal of Sports Psychology 14 (1983): 219-227. (16,34)

Lewis, Ricki. "Exercise Addiction - Some Athletes Let Their Fix Take Precedence Over Everything Else. Women's Sports and Fitness 6 January, 1984: 14-17. (16,34)

Lipsyte, Robert. "The Athletes Losing Game." New York Times Magazine November 30, 1986: 58. (24)

Locke, Edwin. "The Applications of Goal Setting to Sports." Journal of Sports Psychology 7 September, 1985: 205-222. (29,35)

Mitchell, Michele. "Fear." Women's Sports and Fitness 8 January, 1986: 24+. (25)

Maltz, Maxwell. Psycho-Cybernetics. Hollywood, Calif.: Wilshire Book Co., 1960. 176. (6)

Murphy, Shane M., and Robert L. Woolfolk. "Effects of Cognitive Intervention on Sports Anxiety and Performance." Paper presented at Annual Convention of the American Psychology Association. Aug. 1984: 1-24. (17,34)

Nideffer, Robert M. "Concentration and Relaxation in Sports." Sports Medicine Digest 7 (September 1985): 1-3. (30,34)

Ogilvie, Bruce. "Mastering Mental Moves." Women's Sports and Fitness June, 1984: 56-57. (30,34)

Ogilvie, Bruce. "Psychology and the Elite Young Athlete." The Physician and Sports Medicine 11 (April 1983): 192-202. (31,34)

Ogilvie, Bruce. "Psychology: Internal Injuries." Women's Sports and Fitness 6 November, 1984: 62. (17,33)

Ogilvie, Bruce. "Psychology: Looking Past the Finish Line." Women's Sports and Fitness January, 1984: 51. (18,33)

Ogilvie, Bruce. "Psychology: The Tie That Binds." Women's Sports and Fitness February, 1984: 12. (18,34)

Ogilvie, Bruce. "Semi-Tough is Not Enough." Women's Sports and Fitness March, 1984: 50-54. (19,34)

Ogilvie, Bruce. "What's Holding You Back." Women's Sports and Fitness November, 1983: 8-9. (19,34)

Ogilvie, Bruce C., and Maynard A. Howe. "Beating Slumps at Their Own Game." Psychology Today July, 1984: 28+. (19,34)

Olszewska, Gertruda. "The Relationship of a Self-Image, Self-Estimation, and a Tendency to Dominate or Submit." International Journal of Sports 13 (1982): 107-113. (20,33)

Pearson, Philip. "Practical Application of Hypnosis in Sporting Performances."Australia Journal of Clinical Hypnotherapy 4 (March 1983): 13-19. (31,34)

Potera, Carol. "Women's Mental Edge." Women's Sports and Fitness 8 July, 1986: 53. (14)

Ransom, Kay. "Effect of Situation Criticality on Performance of Elite Male and Female Tennis Players." Journal of Sports Behavior 8 (September, 1985): 144-148. (11)

Ross, John P. Jr. "Whose Winning - Your Sport or You?" Health 12 July/August 1980: 17-18+. (21,34)

Shriver, Pam. "Competition." Women's Sports and Fitness 8 January, 1986: 25+. (25)

Shoemaker, John Bruce. "Is Your Game Aggressive?" Women's Sports and Fitness 8 November, 1986: 49. (21,34)

Singer, Robert. "What Sports Psychology Can Do for the Athlete and Coach." International Journal of Sports Psychology 15 (1984): 52-61. (11,33)

Tarshis, Bary. "Why Some Athletes Choke." Seventeen September, 1980: 40-45. (32)

Taylor, Jim. "The Effects of Mental Fitness on Athletic Performance." International Journal of Sports Psychology (1981): 87-95. (12,34)

Tutko, Thomas and Umberto Tosi. Sports Psychology. Boston: Houghton Mifflin Co., 1976. 34. (5)

Tutko, Thomas, and William Bruns. "The Child Superstar: A Curse or a Blessing?" Tennis USA March, 1978: 40-42+. (22,34)

Vanfrachen-Raway, Renee. "Two Components of the Same Sport: Jumping and Sprinting - Two different Behaviors in Competition." International Journal of Sports Psychology 14 (1983): 252-262. (22,34)

Wayment, Heidi. "Anger" Women's Sports and Fitness 8 January, 1986: 24-25+. (25)

Webster's New Collegiate Dictionary. Springfield, Mass.: G & C Merriam Co. (5)

Wooden, John R. Practical Modern Basketball. New York: Ronald Press Co., 1966. 15. (7)

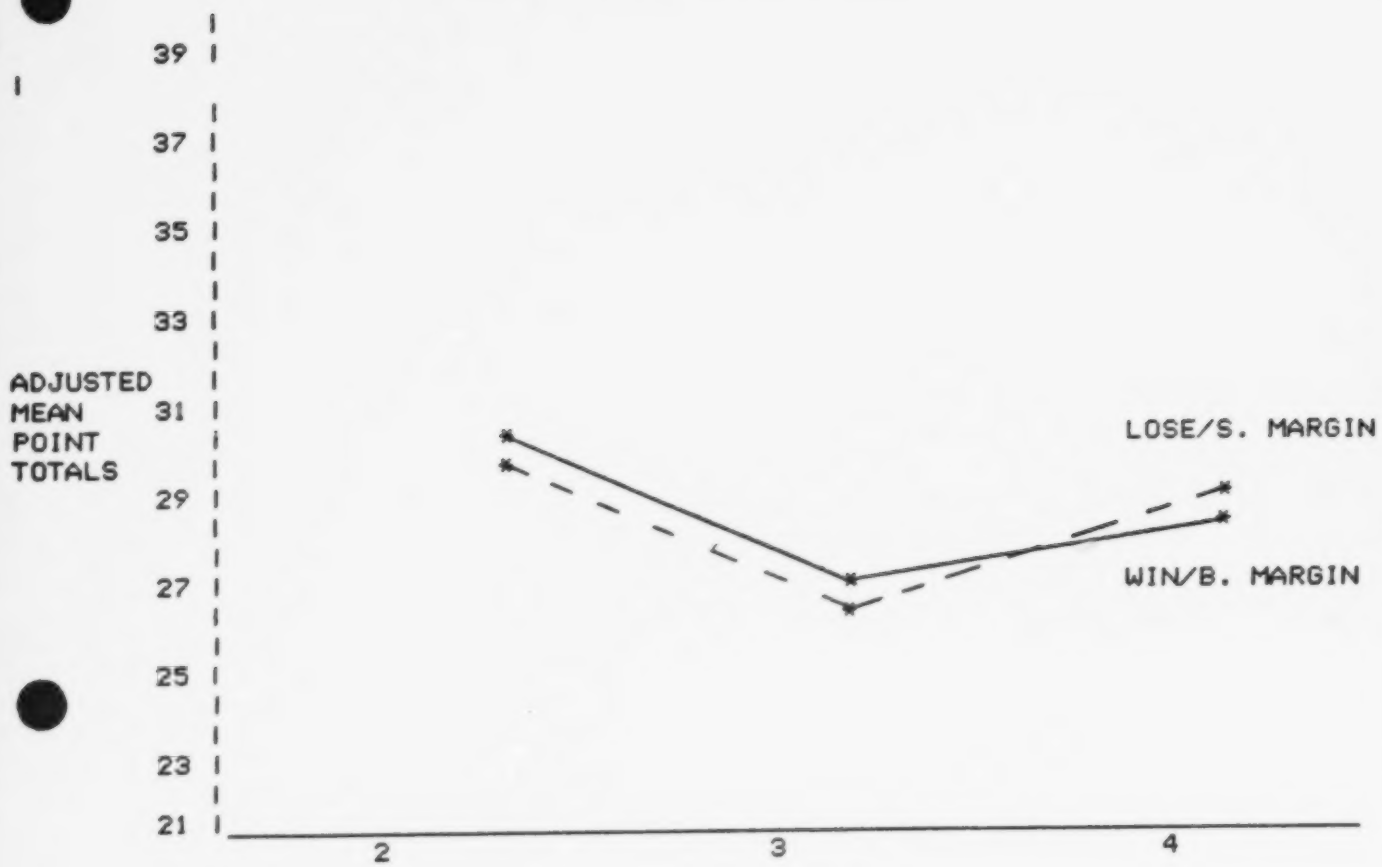
Zimmer, Judith. "Mental Gymnastics." Health August, 1984: 50. (31,34)

Zimmer, Judith. "That Old Black Magic." Health 18 December, 1986: 12. (32)

APPENDIX

Appendix A

PERFORMANCE QUALITY



Appendix B

The final statistical analysis involved the use of the Pearson-Product Treatment Correlation to determine the relationships between the variables investigated in this study. Table IV illustrates the relationships between variables.

Table IV

Correlations Among Variables

	Total	Athlete	Non-Athlete
SEX MASC SEX FEM	.43	NS	.43
SEX MASC SEX AND	-.24	-.32	-.25
SEX FEM SEX AND	.42	.42	.47
ACH MOT SEX MASC	.41	.40	.54
ACH MOT SEX FEM	.35	.32	.32
ACH MOT SEX AND	-.32	-.31	-.24

These correlations indicate that achievement motivation is significantly related to all four sex role classifications; but highly related to the masculine and androgynous classifications.

Discussion

Achievement motivation and sex role orientation are important variables to consider in analyzing the behavior of individuals. The purpose of this study was to determine descriptive characteristics of high school female athletes and non-athletes on measures of achievement motivation and sex role orientation. Upon analyzing the data, it became apparent that female high school track and field athletes differed significantly from non-athletes on achievement motivation. The female athletes demonstrated significantly higher levels of achievement motivation.

BEST COPY AVAILABLE

Appendix C

TABLE I

Analysis of Variance for Number of Good Serves Across Three Measurement Times.

Source	df	MS	F
Treatment (A)	1	10.89	8.52 *
Teams (B)	5	7.47	5.84 **
A × B	5	6.89	5.39 **
Errorbs	12	1.28	
Time of Measurement (C)	2	81.79	168.29 ****
A × C	2	3.77	7.75 ***
B × C	10	136	2.79 *
A × B × C	10	0.56	1.16
Errorws			

* p<.025
** p<.01
*** p<.005
**** p<.001

TABLE II

Analysis of Variance for Scores on Sport Competition Anxiety Test Across Three Measurement Times.

Source	df	MS	F
Treatment (A)	1	11.68	4.45
Teams (B)	5	13.61	5.19 **
A × B	5	10.21	3.89 *
Errorbs	12	2.63	
Time of Measurement (C)	2	5.18	5.65 **
A × C	2	6.52	7.11 ***
B × C	10	3.18	3.47 **
A × B × C	10	1.55	1.69
Errorws	24	0.92	

* p<.025
** p<.01
*** p<.005

Appendix C - Continued

TABLE III

Means and Standard Deviations for Treatment and Control Groups on Both Dependent Measures Across Measurement Time.

Dependent Variable	Group	Pre		Post 1		Post 2	
		M	SD	M	SD	M	SD
Good Serves	Control	8.91	1.16	9.58	0.51	6.33	0.65
	Treatment	8.91	1.44	11.16	2.12	7.08	1.44
SCAT Score	Control	25.16	1.52	25.50	1.00	24.90	1.51
	Treatment	25.41	1.83	23.66	2.67	24.00	2.00

Appendix D

Treatment Group	Low		Medium		High		
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	
Stress reduction	72.5	82.2	66.0	72.4	49.8	75.9	Mean
	14.6	12.4	29.1	30.8	15.0	13.1	S.D.
Psyching-up	80.6	63.6	61.3	71.4	57.7	66.8	Mean
	22.1	27.7	16.5	8.2	20.8	9.8	S.D.
Control	75.4	71.2	70.0	76.9	66.0	70.8	Mean
	13.4	27.2	22.3	18.8	15.7	16.9	S.D.

High scores equal low tension

Appendix E

	never (1)	rarely (2)	sometimes (3)	always (4)
After a loss, bad play, turnover, etc., my negative feelings don't subside quickly.				
When I recognize I have superior skill, it is difficult for me to bear down on my opponent.				
Once my opponent gets ahead, I tend to let down.				
Sometimes I feel so sorry for an opponent I can't play up to standard.				
I find it extremely difficult to tell my teammates when I sense them letting up.				
It is important to me that my teammates know how I am feeling.				
When practicing against teammates, I find it hard to be competitive.				
I am sensitive as to how my teammates feel toward me.				
When my coach criticizes me, I get hurt and depressed.				
When my coach expresses disapproval it may take me hours to bounce back.				
When I am losing, my attention turns quickly to getting the game over as soon as possible.				
I can't keep from feeling distracted by my emotions when things start to go wrong.				
When the fans get down on me it causes me to get discouraged.				
Total				

Women's Sports

Appendix F

TABLE I

The level of aspirations vs. performance effectiveness.

Performance effectiveness	Players securing themselves against responsibility for their actions %	Sensible players %	Reckless players %
very high	2.1	43.5	34.4
medium	11.2	67.3	21.5
low	69.6	18.1	12.3

Level of tendency to dominate and submit	High	Medium effectiveness	Low %
Extreme A_4	—	—	3.8
Considerable A_3	—	—	17.5
Distinct A2	1.6	6.8	38.1
Low A1	3.8	13.3	21.3
Average	20.7	31.1	7.2
Low S1	32.9	28.6	12.1
Distinct S^2	24.3	19.4	—
Considerable S^3	7.7	0.8	—
Extreme S4	—		

111

Appendix G

TABLE 1 - PERFORMANCE RESULTS OF THE 1978 and 1979 NAIA DISTRICT 20 SWIM CHAMPIONSHIPS

Sub.	Event	Time 78	Time 79	Difference	Rank of Difference	Rank w/Less Freq. Sign
a 1	500 free	4.43.88	4.39.05	+4.23	8	
b 1	500 free	4.50.60	4.49.55	+1.25	6	
c 1	500 free	4.58.14	4.53.93	+4.21	7	
d 1	100 breast	1.08.985	1.08.29	+ .69	5	
e 1	200 free	1.46.63	1.46.85	− .22	−1	
a 2	400 I.M.	4.25.60	4.16.39	+9.21	9	
b 2	200 free	1.47.65	1.48.22	− .57	−4	4
c 2	100 free	40.38	40.10	+ .33	3	
d 2	1 Mater Dive	4.03.00	487.05	+23.15	11	
e 2	200 I.M.	2.00.94	2.01.24	− .30	2	2
a 3	1650 free	17.02.35	16.49.45	+12.00	10	
d 3	3 Mater Diver	450.45	515.50	+65.75	12	

Appendix G - Continued

Questions	Valarine Average	Overall Average
1. The overall effectiveness of the motivational workshop (October 1973 through March 1975) was	4.0	3.9
2. The assignment and effectiveness of the big brother-little brother relationship was	3.8	3.4
3. In general the techniques and exercises demonstrated were of help in psychologically motivating me for swimming	3.3	3.3
4. Due to the motivational workshop the team's spirit of cooperation was	4.0	3.9
5. Due to the motivational workshop, I found that my attitude toward swimming	4.2	4.7
6. The facilitators (O'Block and Evans) were	4.3	4.3
7. The presence of the facilitators at swimming meets was	4.2	4.2
8. The motivational workshop helped me understand and control my level of anxiety at swim meets	3.6	3.4
9. The motivational workshop helped me develop and generate psychological motivation for my swimming	3.6	3.4
10. The workshop helped me understand motivational terminology	3.8	3.9
11. Through the motivational workshop, I have a better understanding of myself as a swimmer	3.8	3.4
12. Team-mates	3.4	3.0
13. Big/Little Brother	3.4	3.5
14. Motivational Slogans	3.2	3.2
15. Behavior Ownership	3.2	3.4
16. Lecture on anxiety	3.8	3.9
17. Facilitators (O'Block-Evans)	3.6	3.4
18. Emotional Reactive - Rational Thought	4	3.7
19. Motivational Workshop	4.2	4.1
20. "You can do it" - "I will do it"	3.9	3.2

BEST COPY AVAILABLE

Appendix H

LET'S PLAY CONCENTRATION

Take this test to determine your attentional strengths and weaknesses. Are you better at focusing on a single object or are you able to attend to large quantities of stimuli? Respond to each statement in the quiz by giving it a value of 0 to 4; then total your score for each of the six pairs of statements. The key at the end will explain your focal strong points and indicate where you need more work.

Points
0 = Never
1 = Rarely
2 = Sometimes
3 = Frequently
4 = All the time

A. 1. I am good at quickly analyzing a complex situation such as how a play is developed in football or which of five kids started a fight. ___

2. In a room filled with children or on a playing field, I know what everyone is doing. ___

Total for Section A: ___

B. 1. When people talk to me, I find myself distracted by the sights and sounds around me. ___

2. I get confused trying to watch activities such as a football game or a circus where many things are happening at once. ___

Total for Section B: ___

C. 1. All I need is a little information and I can come up with a large number of ideas. ___

2. It is easy for me to bring together ideas from a number of different areas. ___

Total for Section C: ___

D. 1. When people talk to me, I find myself distracted by my own thoughts and ideas. ___

2. I have so many things on my mind that I become confused and forgetful. ___

Total for Section D: ___

E. 1. It is easy for me to keep thoughts from interfering with something I am watching or listening to. ___

2. It is easy for me to keep sights and sounds from interfering with my thoughts. ___

Total for Section E: ___

F. 1. I have difficulty clearing my mind of a single thought or idea. ___

2. In games I make mistakes because I am watching what one person does and I forget about the others. ___

Total for Section F: ___

SCORING

A. Broad external. The higher your score, the more effectively you deal with a large number of external stimuli.

B. External overload. The higher your score, the greater your tendency to make mistakes because you've been overloaded and distracted by external stimuli. If you score high, you have difficulty narrowing attention when you need to.

C. Broad internal. A high score means that you are able to think about several things at once when it is appropriate to do so.

D. Internal overload. A high score reveals that you make mistakes because you think about too many things. Your thoughts and feelings interfere with what you're doing.

E. Narrow effective focus. High scorers are able to narrow internal and external attention effectively when the situation calls for it.

F. Errors of underinclusion. High scorers have chronically narrowed internal and external attention. You make mistakes because you cannot broaden attention when you need to.